

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局(43) 国際公開日  
2004 年 10 月 7 日 (07.10.2004)

PCT

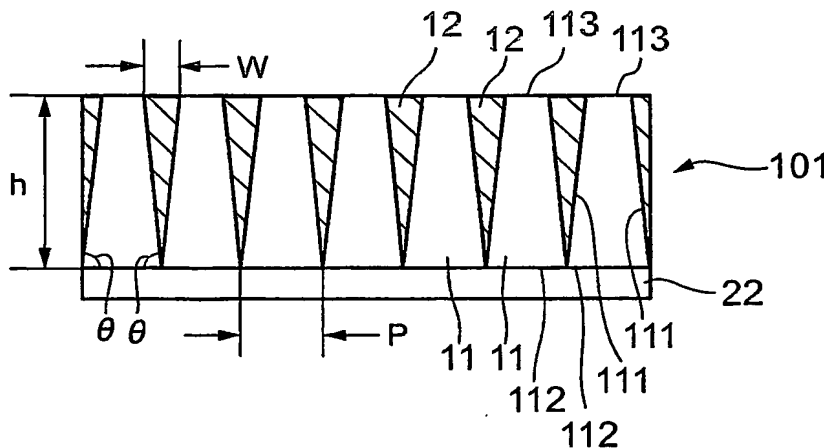
(10) 国際公開番号  
WO 2004/085067 A1

- (51) 国際特許分類<sup>7</sup>: B02B 5/02, G02B 5/04, 3/08 (72) 発明者; および  
(21) 国際出願番号: PCT/JP2004/004202 (75) 発明者/出願人 (米国についてのみ): 桂 有希 (KAT-SURA, Yuki) [JP/JP]; 〒1628001 東京都新宿区市谷加賀町一丁目 1 番 1 号 大日本印刷株式会社内 Tokyo (JP). 後藤 正浩 (GOTO, Masahiro) [JP/JP]; 〒1628001 東京都新宿区市谷加賀町一丁目 1 番 1 号 大日本印刷株式会社内 Tokyo (JP).  
(22) 国際出願日: 2004 年 3 月 25 日 (25.03.2004)  
(25) 国際出願の言語: 日本語  
(26) 国際公開の言語: 日本語 (74) 代理人: 吉武 賢次, 外(YOSHITAKE, Kenji et al.); 〒1000005 東京都千代田区丸の内三丁目 2 番 3 号 富士ビル 3 2 3 号 協和特許法律事務所 Tokyo (JP).  
(30) 優先権データ:  
特願2003-082693 2003 年 3 月 25 日 (25.03.2003) JP  
特願2003-119588 2003 年 4 月 24 日 (24.04.2003) JP (81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
(71) 出願人 (米国を除く全ての指定国について): 大日本印刷株式会社 (DAI NIPPON PRINTING CO., LTD.) [JP/JP]; 〒1628001 東京都新宿区市谷加賀町一丁目 1 番 1 号 Tokyo (JP).

[続葉有]

(54) Title: DIFFUSION SHEET, TRANSMISSION SCREEN HAVING THE SAME, DIFFUSION SHEET MOLD MAKING METHOD AND DIFFUSION SHEET PRODUCING METHOD

(54) 発明の名称: 拡散シート、それを備えた透過型スクリーン、拡散シート用成形型の作製方法および拡散シートの製造方法



(57) Abstract: On a diffusion sheet (101), a plurality of substantially trapezoidal prismatic unit lenses (11) are arranged so that their longer axes are parallel to each other and so that planes corresponding to longer bottom sides (112) in the substantially trapezoidal cut surfaces of the unit lenses (11) all lie on a light incidence plane. Further, a groove between adjacent unit lenses (11) is formed with a light absorbing section (12) for absorbing and/or blocking the outside light coming in from the light going-out side. In such diffusion sheet (101), the light incident on each unit lens (11) from the light going-out side is totally reflected on a plane corresponding

to the lateral side (111) in the substantially trapezoidal cut surface normal to the longer axis of each unit lens (11) and goes out from the light going-out side. In this case, in each unit lens (11), the distance (h) between both bottom sides (112, 113) in the substantially trapezoidal cut surface is from 120% to 400% of the length (p) of the longer bottom side (112) ( $h/p = 1.20 - 4.00$ ).

(57) 要約: 拡散シート 101 においては、略台形柱形状の複数の単位レンズ部 11 が、長軸方向が互いに平行になるように、かつ、単位レンズ部 11 の略台形形状の切断面における長い底辺 112 に対応する面が全て入光側の一平面上にあるように配列されている。また、隣り合う単位レンズ部 11 の間の溝には、出光側から入光する外部光を吸収および/または遮光する光吸収部 12 が形成されている。このような拡散シート 101 において、各単位レンズ部 11 に入光側から入光した光は、当該各単位レンズ部 11 の長軸方向に垂直な略台形形状の切断面における側辺 111 に対応する面において全反射されて出光側から出光される。ここで、各単位レンズ部 11 は、略台形形状の切断面における両底辺 112、113 間の距離 h が、長い底辺 112 の長さ p の 120% 以上 400% 以下 ( $h/p = 1.20 \sim 4.00$ ) である。

WO 2004/085067 A1



NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,  
SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
VC, VN, YU, ZA, ZM, ZW.

NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,  
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:

— 国際調査報告書

(84) 指定国 (表示のない限り、全ての種類の広域保護が  
可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL,  
SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG,  
KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY,  
CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,

2文字コード及び他の略語については、定期発行される  
各PCTガゼットの巻頭に掲載されている「コードと略語  
のガイダンスノート」を参照。

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004202

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> B02B5/02, G02B5/04, G02B3/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> B02B5/02, G02B5/04, G02B3/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004

Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP 2003-066206 A (Dainippon Printing Co., Ltd.), 05 March, 2003 (05.03.03), Full text; all drawings (Family: none)	1, 2, 5, 6, 8, 9 7 3, 4, 10-41
X Y A	JP 2003-57416 A (Dainippon Printing Co., Ltd.), 26 February, 2003 (26.02.03), Full text; all drawings (Family: none)	1, 2, 5, 6, 8, 9 7 3, 4, 10-41
Y A	JP 2000-347009 A (Dainippon Printing Co., Ltd.), 15 December, 2000 (15.12.00), Full text; all drawings (Family: none)	1, 2, 8, 9 3-7, 10-41



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search  
17 June, 2004 (17.06.04)Date of mailing of the international search report  
06 July, 2004 (06.07.04)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004202

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-38209 A (Konica Corp.), 12 February, 1999 (12.02.99), Full text; all drawings (Family: none)	31
A	JP 2000-180612 A (Dainippon Printing Co., Ltd.), 30 June, 2000 (30.06.00), Full text; all drawings (Family: none)	31
Y A	JP 2000-66307 A (Mitsubishi Rayon Co., Ltd.), 03 March, 2000 (03.03.00), Full text; all drawings (Family: none)	7 16, 25, 35
A	JP 10-311906 A (Alps Electric Co., Ltd.), 24 November, 1998 (24.11.98), Full text; all drawings (Family: none)	38-41